

PORFIR'YEVA, Yu. I.

Orientation of addition of bromine to alkenylacetylenes.

A. A. Petrov and Yu. I. Porfir'eva (Petrovskii Tekhnicheskii Inst., Leningrad). Doklady Akad. Nauk S.S.S.R. 111, 832-41 (1956).

—Bromination of 13.2 g. HC₁CCH:CHMe with 21.8 g. Br in CHCl₃ at -10° gave 84% dibromides, b_D 84-78°, d₂₀ 1.7026, n_D²⁰ 1.5742. This (9 g.) with 3 g. KOH in cold MeOH 2 hrs. gave 32% Br⁻ ions and 1.6 g. compd., C₁₁H₁₂Br, b_D 45-7°, d₂₀ 1.3783, n_D²⁰ 1.5210; the dibromide heated with Cu₂Br₂ in concd. HBr with Et₂O 5 hrs. gave some 60% 1,2-dibromo-1,3-pentadiene, b_D 60-2°, d₂₀ 1.8079, n_D²⁰ 1.5670, which failed to react with alc. KOH under above conditions. The bromination of 8.1 g. HC₁CCH:CHEt with 7 g. Br in CHCl₃ as above gave 76% dibromides, b_D 85-95°, d₂₀ 1.6937, n_D²⁰ 1.5660, which with MeOH-KOH in the cold gave 42% Br⁻ ion. The results were discussed in the light of earlier work (cf. C.A. 48, 6373a; 50, 7713e). The infrared spectra of compds. described above were reproduced and were used for confirmation of the suggested structure. G. M. Kosolapoff.

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PORFIRYEVA, Yu. I.

AUTHORS: Bal'yan, Kh. V; Petrov, A. A.; Porfir'yeva, Yu. I. 79-2-19/58

TITLE: Study of Conjugated Systems. Part 72. Hydrogenation of Alkenylacetylenes (Issledovaniya v oblasti sopryazhennykh sistem. LXXII. Gidrirovaniye alkenilatsetilenov)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 365-370 (U.S.S.R.)

ABSTRACT: Experiments on the hydrogenation of propenylacetylene (pentene-3-in-1), butenylacetylene (hexene-3-in-1) and isopropenylacetylene (2-methyl-butene-1-in-3) with colloidal palladium as catalyst showed that in the case of the vinylacetylene hydrocarbons with final acetylene grouping, there is a greater selectivity in the hydrogenation process than in the case of vinylalkylacetylenes. The chemical processes occurring during the hydrogenation of the hydrocarbons described are explained. The isoprene in the hydrocarbon mixture derived during the hydrogenation of isopropenylacetylene was determined in the form of tetrabromide and by the product of its condensation with maleic anhydride. It was established that piperylene and hexadiene-1,3 were formed during the hydrogenation of propenyl- and butenylacetylenes which enter into reaction

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Study of Conjugated Systems. Part 72. Hydrogenation of Alkenylacetylenes
of further hydrogenation (up to olefines) in a much lesser degree than
the very same hydrocarbons obtained during the hydrogenation of vinyl-
methyl and vinylethyl acetylenes.

A similar selectivity was also observed during the hydrogenation of
acetylene alcohols with final acetylene grouping. It was discovered
during the hydrogenation of the hydrocarbons that the entire surface of
the catalyst, capable of hydrocarbon adsorption, was occupied by acetylene
groupings of alkenylacetylenes up to the moment of almost complete con-
version into diene hydrocarbons. After the surface was liberated, the
hydrogenation of the diene hydrocarbons began with a considerably greater
rate. The differences in the behavior during catalytic hydrogenation are
explained.

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79-2-19/58

Study of Conjugated Systems. Part 72. Hydrogenation of Alkenylacetylenes

3 tables, 1 graph. There are 9 references, of which 5 are Slavic

ASSOCIATION: Leningrad Technological Institute imeni Lensovet

PRESENTED BY:

SUBMITTED: February 24, 1956

AVAILABLE: Library of Congress

Card 3/3

PORFIR'YEVA, Yu. I.

PETROV, A.A.; PORFIR'YEVA, Yu.I.; SEMENOV, G.I.

Research in the field of conjugated systems. Part 7k: Infrared spectra and reactivity of vinyl acetylene hydrocarbons. Zhur.ob. khim. 27 no.5:1167-1174 My '57. (MLRA 10:8)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.
(Acetylene compounds--Spectra)
(Vinyl compounds)

PORFIR'YEVA, YU.I.

PETROV, A.A.; PORFIR'YEVA, Yu.I.; SEMENOV, G.I.

Research in the field of conjugated systems. Part 75: Reaction of propargyl bromide with aliphatic aldehydes in S.N. Reformatskii's conditional reactions. Zhur.ob.khim. 27 no.5:1175-1178 My '57.
(MLRA 10:8)

1.Leningradskiy tekhnologicheskij institut imeni Lensoveta.
(Propyne) (Aldehydes)

Porfir'eva, Yu. I.

Conjugated systems. LXXVI. Order of addition of bromine to alkenyl- and dialkenylacetylenes, A. A. Petrov and Yu. I. Porfir'eva (Leusovet Technol. Inst., Leningrad). *Zh. Obshch. Khim.* 27, 1805-13 (1957); cf. *C.A.* 52, 3001d.

-Br (21.8 g.) in CHCl_3 with 13.2 g. $\text{MeCH}:\text{CHC}:\text{CH}$ at -10° gave 84% 1,4-dibromo-1,2-pentadiene/contaminated with 1,2-dibromo-1,3-pentadiene, b_p 66-76°, d_4 1.7920, n_D^{20} 1.5742, which treated with MeOH-KOH lost 32% Br ion in 2 hrs. in the cold yielding 1-bromo-3-penten-1-yne, b_p 45-7°, 1.3785, 1.5210, and 1,2-dibromo-1,3-pentadiene, b_p 62-6°, 1.7630, 1.5719, neither of which was isolated in completely pure state. The initial dibromide heated with $\text{HBr-Cu}_2\text{Br}_2$ in Et_2O 5 hrs. gave 60% 1,2-dibromo-1,3-pentadiene, b_p 60-2°, 1.8070, 1.5070, which failed to lose Br in MeOH-KOH in the cold. Bromination of $\text{EtCH}:\text{CHC}:\text{CH}$ as above gave 1,4-dibromo-1,2-hexadiene (contaminated with probably 1,2-dibromo-1,3-pentadiene), b_p 85-95°, 1.6937, 1.5050, which with MeOH-KOH in the cold in 2 hrs. gave a loss of 42% Br ion; heating the dibromide with $\text{HBr-Cu}_2\text{Br}_2$ in Et_2O gave 1,2-dibromo-1,3-hexadiene, b_p 85-90°, 1.7092, 1.5022. Similar bromination of $\text{CH}_3:\text{CMeC}:\text{CH}$ gave 1,2-dibromo-2-methyl-3-butyne, b_p 51-3°, 1.7685, 1.5340. Bromination of 3-methyl-3-penten-1-yne gave similarly a mixt. of 1,4-dibromo-3-methyl-1,2-pentadiene, 1,2-dibromo-3-methyl-1,3-pentadiene, and 3,4-dibromo-3-methyl-1-pentyne, b_p 70-85°, 1.6867, 1.5548, which in 4 hrs. in cold MeOH-KOH lost 40% Br ion; heated with $\text{HBr-Cu}_2\text{Br}_2$ the dibromide mixt. gave mixed dibromides, mainly 1,2-dibromo-3-methyl-1,3-pentadiene,

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b_p 65-7°, 1.6630, 1.5389. Bromination of Me₂CC(:CH₂)-C≡CH as above gave mixed dibromides, mainly 1,2-dibromo-3-*tert*-butyl-1,3-butadiene, b_p 83-83°, 1.6285, 1.6239. Bromination of vinylacetylene gave 1,2-dibromo-3-hexyne, b_p 87-7.5°, n_D²⁰ 1.6172. Infrared spectra of the products are shown and the structural details are supported by these. While alkenylacetylenes generally add Br in 1,4-positions and yield allenyl dibromides, the *tert*-Bu deriv. described above yields mainly the 1,3-diene dibromide.

G. M. Kosolapoff

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2 May
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POREIKOVA, Yu. I.

Distr: 4E4j/4E2c(j)/4E3d

27 / Conjugated systems. LXXVIII Order of addition of hydrogen halides to propenylacetylene. A. A. Petrov and Yu. I. Poreikova (Lensoviet Technical Inst., Leningrad). *Zhur. Obshchei Khim.* 27, 2076-81(1957); cf. C.A. 51, 15394b; 52, 4468b; preceding abstr.—Shaking 8.8 g. propenylacetylene with 29 ml. concd. HCl 3 hrs. gave 2.7 g. 2-chloro-1,3-pentadiene, b. 97-8°, d₄ 0.9040, n_D²⁰ 1.4685, which refluxed with excess MeOH-KOH lost but 5.5% Cl content in 1 hr.; heated with 1,4-naphthoquinone in MePh it gave after aq. treatment and air-blowing some 1-methyl-3-chloroanthraquinone, decomp. 188-9°. Shaking isopropenylacetylene 5 hrs. with aq. HBr (d. 1.74) gave 6.7 g. 2-bromo-1,3-pentadiene, b₁₀ 64-6°, 1.2273, 1.5040, and 3 g. dibromo deriv., C₈H₈Br₂, b₁₀ 60-5°, 1.6681, 1.5245; the former lost 20% of Br content in 1 hr. in hot MeOH-KOH, and, heated with 1,4-naphthoquinone, it gave 3-bromo-1-methylanthraquinone, m. 176-70°. Treatment of vinyl ethylacetylene with aq. HBr as above gave mixed C₈H₈Br, b₁₀ 94-104°, 1.2704, 1.5070, which lost 46% Br in cold MeOH-KOH; this gave mainly 3-bromo-1,3-hexadiene. Infrared spectra and ozonolysis indicate the formation of much EtCH=C-CHCH₂Br. Similar treatment of isopropenylacetylene with aq. HBr gave also a mixt. of all possible isomeric adducts of HBr, b₁₀ 42-8°, 1.3283, 1.5068, which lose 48.4% Br in 1 hr. in cold MeOH-KOH; ozonolysis gave some Br-CH₂Ac. Thus, isopropenylacetylene and vinyl ethylacety-

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A.A. Petrov, *Izv. Akad. Nauk SSSR Ser. Khim.* 1965, 2051.
 ene give all isomeric adducts of HBr. Propenylacetylene, however, gives the adduct at the acetylenic link, forming a 2-halo-1,3-pentadiene. Infrared spectra of the products are recorded. LXXVIII. Raman spectra and reactivity of vinylacetylenic hydrocarbons. A.A. Petrov, V. A. Kolesova, and Yu. I. Porfir'eva. *Ibid.* 2051. The examn. of Raman spectra of selected vinylacetylenes indicates that the enhanced reactivity of the triple bond in respect to H and hydrogen halides may be connected with the high degree of polarizability of this bond. The following data are reported. $MeCH:CHC:CH$ b. 40.5-7.5°, d₄ 0.7203, n_D 1.4348, Raman spectrum 3300(1), 3040(1), 3015(2), 2979(1), 2949(1), 2922(7), 2100(15), 1630(8), 1610(10), 1441(8), 1391(2), 1373(2), 1360(1), 1301(0), 1279(1), 1227(8), 1116(1), 1023(7), 948(1), 922(7), 782(5), 637(2), 490(7), 385(1), 367(2), 330(1), 267(1), 171(10) cm⁻¹, infrared spectrum 3300, 3040, 2935, 2911, 2915, 2837, 2114, 1661, 1623, 1445, 1383, 1364, 1280, 1221, 1161, 1110, 1075, 1023, 955, 843 and 729 cm⁻¹. $CH_2:CMcC:CH$ b. 32-2.5°, 0.7084, 1.4154, Raman spectrum 3300(2), 3103(6), 3027(4), 2982(5), 2959(1), 2928(8), 2735(1), 2100(15), 2025(1), 1650.

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A.A. PETROV & YU. I. BIRIA'EVA

(1), 1012(12), 1444(4), 1429(1), 1387(10), 1372(2), 1284(0), 1264(4), 1010(5), 983(1), 962(5), 902(5), 703(0), 718(1), 615-40(0), 645(1), 524(8), 391(9), 200(0), 190(10) cm⁻¹, infrared spectrum 3300, 3100, 2904, 2907, 2632, 2474, 2114, 1623, 1451, 1412, 1379, 1272, 1230, 1174, 1090, 1015, 960, 903, 837, 782, 702 and 720 cm⁻¹. CH₂: CHC; CMe b. 59-6.5°, 0.7406, 1.4488, Raman spectrum 3101(2), 3014(8), 2917(12), 2330(4), 2235(20), 2094(1), 1600(15), 1589(2), 1409(8), 1377(8), 1291(10), 1160(6), 1032(3), 918(3), 746(0), 702(1), 677(3), 657(1), 621(7), 370(1), 309(4), 317(8) cm⁻¹, infrared spectrum 3115, 3058, 3030, 2941, 2857, 2257, 2209, 2075, 1655, 1608, 1445, 1418, 1370, 1295, 1107, 1069, 1020, 970, 920, 870, 745, 701 and 670 cm⁻¹. CH₂: CHC; CEt b. 83.5-84°, 0.7479, 1.4522, Raman spectrum 3110(6), 3038(8), 2933(4), 2948(3), 2623(3), 2330(4), 2230(20), 2190(4), 2098(1), 1600(15), 1502(3), 1460(1), 1435(1), 1414(2), 1391(4), 1377(2), 1291(10), 1160(5), 1087(3),

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А. П. ПЕТРОВ ЧИ. И. ПОРФИР'ЕВ
 1638(5), 642(5), 917(2), 780(2), 681(5), 486(1), 473(1),
 359(4), 334(1), 220(3) cm.⁻¹, infrared spectrum 3115, 3040,
 2976, 2833, 2907, 2865, 2257, 2114, 1658, 1608, 1465, 1445,
 1422, 1381, 1323, 1295, 1167, 1071, 1038, 980, 919 and 780
 cm.⁻¹ CH₂:CHC₁CH, Raman spectrum 3305(1), 3102(2),
 2012(4), 2099(6), 1525(5), 1405(4), 1288(4), 1091(2), 928(2),
 875(2), 678(2), 629(4), 518(4), 309(4), 219(4) cm.⁻¹, infrared
 spectrum 3300, 3108, 3067, 3030, 2907, 2865, 2304, 2114,
 1858, 1610, 1412, 1357, 1241, 1096, 971, 929, 879 and 676
 cm.⁻¹ EtCH:CHC₁CH b. 72-4°, 0.7425, 1.4381; CH₂:
 C(CMe)₂CH b. 98.5-7.5°, 0.7584, 1.4320; CH₂:CHC₁:
 CP, b. 168.5-60°, 0.7597, 1.4529; CH₂:CHC₁CBu b. 133-
 5°, 0.7741, 1.4656; CH₂:CHCH₂C₁CH b. 42-3°, 0.738(16°),
 1.4125(16°); CH₂:CHCH₂C₁Me b. 60-6.5°, 0.7630,
 1.4388. Provisional assignments of the vibrational fre-
 quencies are made in the group. G. M. Kasalanoff

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PETROV, A.A.; PORFIR'YEVA, Yu.I.; YAKOVLEVA, T.V.; MINGALEVA, K.S.

Conjugated systems. Part 42: Order of addition of iodine to vinyl
acetylene hydrocarbons. Zhur.ob.khim. 28 no.9:2320-2324 S '58.
(MIRA 11:11)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.
(Iodine) (Acetylene)

PETROV, A.A.; PORFIR'YEVA, Yu.I.; SEMENOV, G.I.

Conjugated systems. Part 43: Order of addition of alkyl hypobromites
to vinyl alkyl acetylene. Zhur.ob.khim. 28 no.9:2325-2328 S '58.
(MIRA 11:11)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.
(Bromites) . (Acetylene)

5(3)

SOT/79-29-9-5/76

AUTHORS: Petrov, A. A., Porfir'yeva, Yu. I.

TITLE: Investigations in the Field of Conjugate Systems. CVII. On the Affiliation Order of Iodine Chloride to the Vinyl Acetylene Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2830 - 2837 (USSR)

ABSTRACT: The authors continued their investigations of the rules governing the reactions of vinyl acetylene hydrocarbons with halogens (Refs 1-4), and caused them to react with iodine chloride. Affiliation of iodine chloride to vinyl acetylene yielded two fractions having the composition C_4H_4ClI , differing sharply from each other as to boiling temperatures and other properties. The low-boiling product proved to be very stable against the action of alcoholic caustic lyes. Its infrared spectrum revealed the characteristic frequencies of the conjugate system of double bonds, vinyl group, terminal methylene group, terminal acetylene group. These data point to compound (I) which is mixed with compound (II). The prevailing high-

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Investigations in the Field of Conjugate Systems. CVII. SOV/79-29-9-5/76
On the Affiliation Order of Iodine Chloride to the Vinyl Acetylene Hydro-
carbons

boiling product has a chlorine atom which is very little stable against the action of alcoholic caustic lye. Its spectrum revealed an intense frequency of the allene group. The other frequencies were so very weak as to point to very small admixtures of the respective compounds. These data clearly speak in favor of formula (III). Thus, vinyl acetylene takes up iodine chloride predominantly in 1,4-position and at the acetylene bond, as is also the case with bromine (Ref 1). The authors further investigated the addition of iodine chloride to propenyl acetylene and vinyl alkyl acetylene (formulas IV-IX). It was shown that addition proceeds qualitatively in all cases in the same manner as in the addition of bromine. Vinyl- and propenyl acetylene yield 1,4-adducts and adducts on the acetylene bond; vinyl alkyl acetylenes and isopropenyl acetylene yield adducts on the ethylene bond, the latter adduct with an admixture of 1,3-diene iodine chloride. Chlorovinylmethyl- and chlorovinyl-ethyl acetylenes were obtained by the action of alcoholic caustic lye on the iodine chloride adducts of vinyl alkyl acetylenes. The differences in the affiliation of iodine chloride to the vinyl

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Investigations in the Field of Conjugate Systems. CVII. SOV/79-29-9-3/76
On the Affiliation Order of Iodine Chloride to the Vinyl Acetylene Hydrocarbons

acetylene homologues may be explained by rearrangements of the electrons in the molecules of these hydrocarbons (Page 2833 below). The authors thank T. V. Yakovleva for assistance in the investigation of i-r-spectra. There are 2 figures and 8 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensoveta
(Leningrad Institute of Technology imeni Lensovet)

SUBMITTED: July 19, 1958

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30701

S/079/60/030/05/09/074
B005/B002

5.3200

AUTHORS: Petrov, A. A., Porfir'yeva, Yu. I., Yakovleva, T. V.

TITLE: Investigations in the Field of Conjugate Systems. CXVII. On the Problem of the Direction of the Addition of Halogens to Vinyl Acetylene Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. 1441-1444

TEXT: The authors of the present paper describe their investigations concerning the addition of chlorine and iodine bromide to vinyl acetylene and vinyl ethyl acetylene. Iodine bromide lies between bromine and iodine as to its reactivity and has a dipole moment of 0.4 Debye (Ref. 5). The structures of the addition products were determined by analyzing their infrared spectra. On the addition of chlorine to vinyl acetylene there occurs a mixture of allene- and acetylene derivative with a low percentage of dichloride of butadiene. Chlorine therefore behaves in much the same way as bromine in the reaction with vinyl acetylene, the only difference being in that a larger amount of 3,4-addition product and a smaller amount of 1,2-addition product are obtained on a chlorine addition

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Investigations in the Field of Conjugate
Systems. CXVII. On the Problem of the Direction
of the Addition of Halogens to Vinyl Acetylene
Hydrocarbons

S/079/60/030/05/09/074
B005/B002

than would be the case with bromine addition. The main product to result on the chlorination of vinyl ethyl acetylene is the acetylene derivative with a very small admixture of 1,3-diene derivative. Thus, chlorine behaves here in much the same way as bromine. Unlike chlorine, iodine bromide is preferably added to the triple bond in both hydrocarbons under investigation. Addition to the double bond occurs to a small extent, while the corresponding allene derivatives are formed in an inconsiderable amount. Therefore, iodine bromide behaves in much the same way as iodine on the addition. The procedures followed in the investigations are described in an experimental part. Yields, boiling points, densities, and refractive indices of the dihalide mixtures obtained are specified along with the elementary per cent analyses. The characteristic frequencies of the infrared spectra of the mixtures obtained are specified as well. In all cases, the dihalides were isolated by the vacuum distillation of the reaction products, since large amounts of high-boiling higher halides were also obtained on halogenization. To eliminate the possibility of an error due to an isomerization of the reaction

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30701

Investigations in the Field of Conjugate Systems. CXVII. On the Problem of the Direction of the Addition of Halogens to Vinyl Acetylene Hydrocarbons S/079/60/030/05/09/074 B005/B002

products during distillation, the infrared spectra of the crude reaction products were investigated as well. In all cases, these spectra contained the characteristic bands of such dihalides as were afterwards isolated from the mixtures. A figure shows the infrared spectra of the 4 mixtures of dihalogen hydrocarbons obtained. There are 1 figure and 7 Soviet references. X

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensovet
(Leningrad Institute of Technology imeni Lensovet)

SUBMITTED: April 22, 1959

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85389

S/079/60/030/006/016/033/II
B001/B055

5-3600

AUTHORS: Petrov, A. A. and Porfir'yeva, Yu. I.

TITLE: Investigations in the Field of Conjugated Systems. CXIX.
Mode of Electrophilic Addition in Unsymmetrical Dienes. The
Effect of Benzene-sulfone-dibromoamide on Alcoholic
Solutions of Divinyl-acetylene and Its Homologs

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6, pp. 1818-1823

TEXT: Basing on Refs. 1-4, the authors studied the reaction of three hydrocarbons of the series C_nH_{2n-6} (hexadien-1,5-yne-3, 2-methyl-hexadien-1,5-yne-3, 3-methyl-heptadien-2,6-yne-4) with benzene-sulfone-dibromoamide in methanol in order to determine how the direction of polarization in unsymmetrical diene molecules affects the order of addition of electrophilic reagents. The bromine atom fixed the point of initial electrophilic attack, i.e., the point of highest electron density at the moment of reaction (Refs. 5,6). Since the authors found (Ref. 7) that in vinyl-acetylene hydrocarbons, hypobromites are predominantly added to the

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85389

Investigations in the Field of Conjugated Systems. CXIX. Mode of Electrophilic Addition in Unsymmetrical Dienes. The Effect of Benzene-sulfone-dibromoamide on Alcoholic Solutions of Divinyl-acetylene and Its Homologs S/079/60/030/006/016/033/IX
B001/B055

ethylenic linkage, it was to be expected that unsubstituted divinyl-acetylene (I) would only form 1-bromo-2-methoxyhexen-5-yne-3(II) according to the scheme $\text{CH}_2=\text{CH}-\text{C}\equiv\text{C}-\text{CH}=\text{CH}_2(\text{I}) \longrightarrow \text{CH}_2\text{Br}-\text{CHOCH}_3-\text{C}\equiv\text{C}-\text{CH}=\text{CH}_2(\text{II}) \longrightarrow \text{CH}_2=\text{COCH}_3-\text{C}\equiv\text{C}-\text{CH}=\text{CH}_2(\text{III})$. The structure of compound (II) was verified in different ways: By hydrolysis of (III), which gave a methyl vinyl-acetylenyl ketone, and by spectroscopic analysis. The spectrum of the bromo ether still showed the vinyl-group frequencies, but the frequencies of the substituted double bond were missing. The infrared spectrum of methoxy-divinyl-acetylene (III) contained frequencies indicative of an alkoxy-substituted divinyl-acetylene system (Ref. 9). Thus, the authors investigated the order of addition of methyl hypobromite to divinyl-acetylene, vinyl-isopropenyl-acetylene, and 3-methylheptadien-2,6-yne-4 when they were brought to react with benzene-sulfon-dibromoamide in methanol solution. It was found that addition takes place at the double bond, in the case of the two last-

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PETROV, A.A.; PORFIR'YEVA, Yu.I.; KORMER, V.A.

Conjugated systems. Part 135: Course of the addition of alkyl-
hypobromites and lithium-alkyls to vinylpropenylacetylene. *Zhurn.ob.*
khim. 31 no.5:1518-1524 My '61. (MIRA 14:5)

1. Leningradskiy tekhnologicheskii institut imeni Lenooveta.
(Hypobromites) (Lithium organic compounds) (Heptadienyne)

PETROV, A.A.; PORFIR'YEVA, Yu.I.; SVETLOVA, N.I.

Conjugated systems. Part 149: Synthesis and properties of
homologs of allylvinylacetylene. Zhur. ob. khim. 31 no. 11:3525-
3531 N '61. (MIRA 14:11)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.
(Acetylene)

SOKELOV, I.B.; PORFIR'YEV, Yu.I.; PEBLOV, A.A.

Course of the addition of diazomethane to diacetylene homologs.
Zhur.org.khim. 1 no.3:610-611 Mr '65.

(MIRA 18:4)

1. Leningradskiy tekhnologicheskiy institut imeni Leningeta.

FORFIR'YEVA, Yu.I.; TURBANOVA, Ye.S.; PETROV, A.A.

Regularities in addition reactions of diacetylenes. Part 4:
Addition of bromine and mercaptans to disubstituted diacetylenes.
Zhur. ob. khim. 34 no.12:3966-3974 D '64 (MIRA 18:1)

1. Leningradskiy tekhnologicheskii institut imeni Lenooveta.

L 41584-65 EWT(m)/EPF(c)/EPR/EWP(j)/EWA(c) Pc-4/Pr-4/PS-4 RPL WW/JW/EM
ACCESSION NR: AP5008720 S/0366/65/001/003/0610/0611

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B

AUTHORS: Sokolov, L. B.; Porfir'yeva, Yu. I.; Petrov, A. A.

TITLE: Direction of addition of diazomethane to diacetylene homolog

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 3, 1965, 610-611

TOPIC TAGS: methane, acetylene, alcohol, carbonic acid

ABSTRACT: It is shown that the homolog of diacetylene attaches to diazomethane in a reaction in which acetylene and groupings take a primary part. From methyl diacetylene and diazomethane in alcohol, 5-propynylpyrazole was obtained with a boiling temperature of 112-114C and a melting point at 71-72C. Ethyldiacetylene and diazomethane produced 5-butynylpyrazole with a boiling point at 120-122C and a melting point at 38-39C. By oxidizing both alkynylpyrazoles, 5-pyrazolecarbonic acid is obtained with a 212 to 213.5C melting point.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lenooveta (Leningrad Technological Institute)

SUBMITTED: 20Nov64

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 003

Card 1/1 *mc*

PORFIR'YEVA, Yu. I.; SOKOLOV, L. B.; PETROV, A. A.

Regularities in the addition reactions of diacetylenes. Part 2:
Course of the addition of mercaptans o to nearest unsymmetrical
diacetylene homologs. Zhur. ob. Khim. 34 no.6:1881-1386 Je '64.
(MIRA 17:7)

1. Leningradskiy tekhnologicheskij institut imeni Lensoveta.

PORFIR'YEVA, Yu. I.; PETROV, A. A.; SOKOLOV, L. B.

Regularities in the addition reactions of diacetylenes. Part 1:
Course of the addition of bromine and hydrogen bromide to the
nearest unsymmetrical diacetylene homologs. Zhur. ob. Khim.
34 no.6:187-1881 Je '64. (MIRA 17:7)
1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.

PETROV, A.A.; PORFIR'YEVA, Yu.I.; SOKOLOV, L.B.

Course of the reactions in which electrophilic and nucleophilic reagents are added to asymmetrical homologs of diacetylene. Dokl. AN SSSR 151 no.6:1343-1346 Ag '63. (MIRA 16:10)

1. Leningradskiy tekhnologicheskii institut im. Lensoвета.
Predstavleno akademikom B.A.Arbutovym.

PETROV, A.A.; PORFIR'YEVA, Yu.I.

Direction of the addition of hydrogen halides to enyne hydrocarbons with conjugated and nonconjugated multiple bonds.
Zhur.ob.khim. 33 no.10:3215-3223 0 '63. (MIRA 16:11)

1. Leningradskiy tekhnologicheskii institut imeni Lomonosova.

PETROV, A.A.; FORFIR'YEVA, Yu.I.

Conjugated systems. Part 168: Course of the addition of hydrogen halides to diene hydrocarbons - vinylallylacetylene and its homologs. Zhur.ob.khim. 33 no.2:419-427 F '63.

(MIRA 16:2)

Leningradskiy tekhnologicheskii institut imeni Leningeta.
(Hydrogen halides) (Butene) (Conjugation (Chemistry))

PETROV, A.A.; LEBEDEV, V.B.; PORFIR'YEVA, Yu.I.

Conjugated systems. Part 167: Nuclear magnetic resonance spectra
and structure of diene hydrocarbons. Zhur.ob.khim. 33
no.2:416-418 F '63. (MIRA 1612)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.
(Hydrocarbons—Spectra)
(Nuclear magnetic resonance and relaxation)

MIKUSKA, Jozsef; JAKAB, Andras; AUMULLER, Istvan; PORGA, Zoltan; GYORY, Jeno;
PATKAI, Imre, dr.; SCHAFFER, Lajos; BEREZSK, Peter, dr.; GEREBI, Gyorgy

Rare goose and duck occurrences. Aquila 69/70:257-258 '62-'63
[publ. '64].

SZECSEY, Gyorgy, dr.; DOBIAS, Gyorgy, dr.; PORGANYI, Maria, dr.

Human antiglobulin consumption tests in liver diseases. Orv.
hetil. 105 no.9:399-400 1 Mr'64.

1. Budapesti Orvostudományi Egyetem, III. Belklinika, Fovaros
IV, ker. Tanacs Kozkorhaz, Laboratorium es Janos Korhaz- Rendelo-
intezet, Laboratorium.

*

FORGANYI, Maria, Dr.; SZECSEY, Gyorgy, Dr.; TARDOS, Iaszlo, Dr.

Data on the differential diagnosis of obstructive jaundice. Orv.
hetil. 100 no.12:428-431 22 Mar 59.

1. A Fovarosi Istvan Korhaz (igazgato: Katona Istvan dr.) Kozponti
Laboratoriumanak (foorvos: Szecsey Gyorgy dr.) es az Orszagos
Kardiologiai Intezet (igazgato: Gottsegen Gyorgy dr.) kozlemenye.
(JAUNDICE, OBSTRUCTIVE, differ. diag.
hepatitis, evaluation of various serum chem. tests (Hun))
(HEPATITIS, differ. diag.
jaundice, obstruct., evaluation of various serum chem.
tests (Hun))

SZECSEY, Gyorgy, dr.; PORGANYI, Maria, dr.

Significance of Jirgl's reaction in the differential diagnosis of jaundice. Orv.hetil. 102 no.2:76-80 8 Ja '61.

1. Fovarosí IV. ker. Tanács Kórház, Laboratórium és János Kórház-
Rendelőintézet, Központi Laboratórium.
(JAUNDICE diag)

PERGANYI, M.

WEISZ, R.; PERGANYI, M.

Hyperthyreosis and liver function. Orv. hetil., Budap. 92 no.
44:1427-1429. 4 Nov. 1951. (GLML 21:3)

1. Doctors. 2. Second Internal Clinic (Director -- Prof.-Dr.
Imre Haynal), Budapest University.

PORGES, E.; PORGESOVA, L.

Preparation of silica gel for thin-layer chromatography.
Bratisl. lek. listy 43 Pt. 1 no.9:513-517 '63.

1. Katedra lekárskej chémie Lek. fak. Univ. Komenského v
Bratislave, veduci prof. RNDr. J. Kubis, a Katedra analytickej
chémie Slovenskej vysokej školy technickej v Bratislave,
veduci doc. inz. O. Liska, C. Sc.
(CHROMATOGRAPHY) (GELS) (SILICA)

PORGES, E.

Preparation of NH₄SCN labeled with S35. Bratisl. Lek. Listy 42 no.4:
206-208 '62.

1. Z Katedry lekárskej chémie Lek. fak. Univ. Komenského v Bratislave,
vedúci prof. RNDr. J. Kubis.
(THIOCYANATES) (SULFUR ISOTOPES)
(INDICATORS AND REAGENTS) (AMMONIUM COMPOUNDS)

KUBIS, J.; FORGES, E.

▲ new basis for the scale of atomic weights of natural elements and isotopes - carbon isotope C12. Bratisl. lek. listy 42 no.11/12:680-682 '62.

(CARBON ISOTOPES)

PORGES, Eduard, inz.; FORGESOVA, Libusa, inz.

Thin-layer chromatography in narrow channels with variable internal diameter. Chem zvesti 19 no.6:497-502 '65.

1. Chair of Medical Chemistry of the Medical Faculty of Komensky University, Bratislava, Sasinkova 2 (for Porges). 2. Chair of Analytic Chemistry of the Slovak Higher School of Technology, Bratislava, Kollarovo nam. 2 (for Porgesova).

PORGES, E.

Separation of some barbiturates with thin layer chromatography
and the effect of adsorbent buffering. Bratisl. lek. listy 44
no.1:3-7 '64.

1. Katedra lekárskej chémie Lek. fak. Univ. Komenského v
Bratislave; veduci: prof. ~~EDr.~~ J.Kubis.

*

PORGES, E.; Technicka spolupraca: SEKEROVA, K., prom. farm.

Preparation of sphingomyelin from ethereal brain extract.
Bratisl. lek. lesty 45 no.6:353-356 30 S '65.

1. Katedra lekarskej chemie Lek. fak. Univerzity Komenskeho
v Bratislave (veduci prof. RNDr. J. Kubis).

CZECHOSLOVAKIA

PORGES, E; PORGESOVA, L.

1. Chair of Medical Chemistry of the Medical Faculty of Komensky University (Katedra lekarskej chemie Lek. fak. Univ. Komenskeho), Bratislava; 2. Chair of Analytical Chemistry of the Slovak Technical High School (Katedra analytickej chemie Slovenskej vysokej skoly technickej), Bratislava (for both)

Bratislava, Bratislavske lekarske listy, No 9, 1963, pp 513
516

"The Preparation of Silica Gel for Thin Layer Chromatography."

PORGES, Mira
SURNAME (in caps); Given Name

Country: Yugoslavia

Academic Degrees: Magister

Affiliation: / not given/

Source: Zagreb, Farmaceutski glasnik, No 7-8, July August 1961, pp 259-263.

Data: "Contribution to the Determination of Alkaloids in Belladonnae
Folium et Radix and in Tinctura Belladonnae."

Card 1/1

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001342520008-6

PORGES, M.

YUGOSLAVIA/Chemical Technology. Pharmaceutics. Vitamins.
Antibiotics.

H

Abs Jour: Ref Zhur-Khin., No 24, 82668.

Author : Petricic J. Porges M.

Inst :

Title : The Colorimetric Determination of Morphine in
Opium and its Galenic Preparations.

Orig Pub: Farmac. glasnik, 1958, 14, No 1-2, 2-8.

Abstract: A method is developed for the determination of Morphine (I) in small samples of starting materials (for opium 0.2 grams, for the tincture 3 grams). The method is identical with that described in the Pharmacopeia II of Yugoslavia, but the final determination of I is made colorimetrically. Due to the coincident of the results of the determination,

Card : 1/2

PORGES, M.

The testing of leaves and tincture of Digitalis. Proposals for the Addendum of Yugoslavian Pharmacopoeia. II. V. Kušavčić and M. Porges (Inst. Control Drugs, Zagreb). *Acta Pharm. Jugoslav.* 6, 133-41 (1960).—Various samples of leaves and tincture of digitalis have been examined. The stability of the tincture was very poor, and the results varied widely. On the basis of results obtained, it was found that the validity period was 15-20 days, the loss on drying 5%, and ash content 15%. T. Higan-Bijter

2

PORGES, Mira (Zagreb)

On the purity of Chamomillae flos according to Chapter II of Yugoslav Pharmaceutical Regulations. Pharmaceut gl Zagreb Supplement (18) no.5:35-36 '62

1. Institute for Testing and Control of Medicines, Zagreb.

CZECHOSLOVAKIA

POBES, E; PORNEBOVA, L.

1. Chair of Medical Chemistry of the Medical Faculty of Komensky University (Katedra lekárskej chémie lek. fak. Univ. Komenského), Bratislava; 2. Chair of Analytical Chemistry of the Slovak Technical High School (Katedra analytickej chémie Slovenskej vysokej školy technickej), Bratislava (for both)

Bratislava, Bratislavské lekárske listy, No 9, 1963, p^D 513
515

"The Preparation of Silica Gel for Thin Layer Chromatography."

PORGES, Eduard, inz.; PORGESOVA, Libusa, inz.

Thin-layer chromatography in narrow chambers with variable internal diameter. Chem zvesti 19 no.6:497-502 '65.

1. Chair of Medical Chemistry of the Medical Faculty of Komensky University, Bratislava, Sasinkova 2 (for Porges). 2. Chair of Analytic Chemistry of the Slovak Higher School of Technology, Bratislava, Kollarovo nam. 2 (for Porgesova).

PORIAZOV, I.

PORIAZOV, I. Annual business meeting of the District Radio Club in Plovdiv.
p. 3. Vol. 5, no. 11, 1956 ELEKTROENERGIJA. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol 6, No. 4--April 1957

PORILITS, Yu.P., kand. tekhn. nauk

Problems of the automation of the processing of experimental
data. Vest. TSNII MPS 24 no.8:38-41 '65. (MIRA 19:1)

FILINKOVSKAYA, Ye.F.; BUKLOVA, M.G.; PANOV, P.M.; BORISOV, N.P.;
PORILLO, K.P.

Textile-treating substance - condensate BF. Khim.volok. no.1:
72-74 '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstven-
nogo volokna (for Filinkovskaya, Buklova). 2. Ivanovskiy
khimicheskiy zavod im. Baturina (for Panov, Borisov, Porillo).
(Textile finishing)

L 36860-66 EWP(j)/EWT(m) RM

SOURCE CODE: UR/0197/66/000/005/0055/0059

ACC NR: AP6019489

50
B

AUTHOR: Bochkan, P. Ya.; Porin', V. M.; Fel'tyn', I. A.

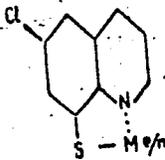
ORG: Power Institute, AN Latv. SSR (Institut energetiki AN Latv. SSR)

TITLE: Prevention of thermal conversion of germanium by means of 6-chloro-8-mercaptoquinoline

SOURCE: AN LatSSR. Izvestiya, no. 5, 1966, 55-59

TOPIC TAGS: germanium, semiconductor conductivity, complex molecule

ABSTRACT: The possibility of cleaning the surface of germanium with the reagent 6-chloro-8-mercaptoquinoline in order to prevent the thermal conversion (change from n-type to p-type conductivity) of this semiconductor was investigated. A simplified method of synthesizing 6-chloro-8-mercaptoquinoline is described. The compositions of compounds of this reagent with Cu, Sn, Sb, Bi, Tl, In, Ga, Ni, Zn, Pb, Cd, Co, and Hg are given and the pH values at which they are formed and their colors are tabulated. The reagent reacts with the metal ions by forming the following complex: ↑



Card 1/2

ACC NAM 170027893

SOURCE CODE: UR/0371/66/000/003/0019/0020

AUTHOR: Porin', V. M.; Fultyn', I. A.

ORG: Institute of Power Engineering AN LatvSSR (Institut energetiki AN LatvSSR)

TITLE: Production of a five-layer p-n-p-n-p structure in germanium

SOURCE: AN LatvSSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk, no. 3, 1966, 19-20

TOPIC TAGS: germanium semiconductor, junction diode, physical diffusion, thermoelectric power, dielectric breakdown

ABSTRACT: The authors produced structures of this type by using n-type germanium (specific resistivity from 3 to 5 ohm-cm) specially treated to remove various contaminating metals from the surface. Samples measuring 10 x 4 x 3 mm were placed in apparatus first evacuated to 10^{-5} mm Hg, and then filled with helium to a pressure slightly higher than atmospheric. They were then annealed by diffusion in a two-zone oven for 2.5 -- 20 hours at sample temperatures at 650 -- 850C and diffusant temperature 600 -- 750C. After the diffusion process, the sample was cooled at a rate of 200C/hr. The surface concentration of the diffusing indium exceeded 2.5×10^{18} cm⁻³. This resulted in a p-n-p-n-p structure free of the difficulties due to thermal conversion. The widths of the individual layers varied with the diffusion temperature,

Card 1/2

L 09408-67

ACC NR: AP6027893

the annealing, and the surface concentration. The breakdown voltages of each junction range from 10 to 15 V. Methods of controlling the production and measuring the surface concentration are mentioned. The temperature dependence of the thermoelectric power in one sample is given. Orig. art. has: 1 figure

SUB CODE: 20/ SUBM DATE: 08Jan65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

BONDAREV, I.; PORISENKO, N.; PESCHANYI, N.

Decision on the introduction of new devices raising the power factor of electric power consuming industries. Prom. energ. 16 no.2:49-50 F '61. (MIRA 14:3)

1. Nachal'nik Soyuzglavenergo pri Gosplane SSSR (for Bondarev).
2. Nachal'nik Upravleniya elektrotehniki i elektroniki Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mekhanizatsii (for Borisenko).
3. Nachal'nik Upravleniya po avtomatizatsii i oborudovaniyu dlya metallurgicheskoy promyshlennosti Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mekhanizatsii (for peschanyy)
(Electric power)

PORITSKAYA, S. P.

USSR / Human and Animal Morphology, Normal and Patho- S-2
logic -- Research Methods and Techniques

Abs Jour: Ref Zhur-Biol., No 13, 1958, 59795

Author : Poritskaya, S. P.

Inst : Ukrainian Central Institute for Scientific Resea-
rch in Orthopedics and Traumatology

Title : A Combination Method for Injecting the Arterial
System with Contrast Media

Orig Pub: Sb. tr. Ukr. tsentr. n.-i. in-ta ortopedii i trav-
matol., 1955, 6, 105-116

Abstract: A saturated solution of barium chloride and a solu-
tion of ammonium sulfate are used, causing metal-
lic barium to settle on the vascular walls. The
small vessels are very well filled. For greater

Card 1/3

7

USSR / Human and Animal Morphology, Normal and Patho- S-2
logic -- Research Methods and Techniques

Abs Jour: Ref Zhur-Biol., No 13, 1958, 59795

capillaries of the medullary canal are presented,
showing these vessels to be well filled with the
contrast mass. -- S. S. Bryusova

Card 3/3

PORITSKIY, A. Ya.

"Nekotorye voprosy karpatskoy istoriko-etnograficheskoy obshchnosti v ukrainskoy etnografii vtoroy poloviny XIX -- pervoy poloviny XX stoletiya (na materialakh zhilishcha i odezhdy)."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

SOV/115-59-7-30/33

25(5)

AUTHORS: Poritskiy, G.S., Voronov, A.M.

TITLE: The Forgotten Ceramic Weights

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 7, p 62 (USSR)

ABSTRACT: Prior to WWII, the Soviet industry produced ceramic weights up to 500 g of categories II and III. The production of ceramic weights was discontinued for a reason unknown to the authors. Ceramic weights have a number of positive properties, for example, their wear is much lower than that of steel weights. Ceramic weights, produced 20 years ago are still serviceable today. Ceramic weights are irreplaceable especially in certain laboratories and whenever high standards of hygiene and sanitation must be met. Weights made of steel require a considerable amount of metal and wear rapidly. In the future, ceramic weights should be produced by the Soviet industry, using the latest achievements of science and engineering. An editorial note says that the statement of the authors is of great importance for the USSR economy. It should be included in the production plans of the RSFSR and the UkrSSR, since these republics have the necessary facilities for producing ceramic weights.

Card 1/1

L 65086-65 EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)

ACCESSION NR: AP5021227

MJW/JD/HM

UR/0125/65/000/008/0075/0075

621.791.75;546.621:625.2

AUTHOR: ¹¹⁴Metel'skiy, A.N. (Engineer); ⁴⁴Poritskiy, M.P. (Engineer); ¹¹⁴Steblovskiy, B.A. (Engineer); ¹¹⁴Vyshnikov, I.Ye. (Engineer); ⁴⁴Polyakov, A.Ye. (Engineer)

TITLE: ¹¹⁴Welding of sliding freightcar roofs made of ⁴⁴AMg6 alloy ⁴⁴SOURCE: ¹¹⁴Avtomaticheskaya svarka, no. 8, 1965, 75 ⁴⁴BTOPIC TAGS: sliding freightcar roof, freightcar roof, transloading, freight loading, argon arc/spot welding/AMg6 ^{44,55, 27}aluminum-magnesium alloy ²⁷

ABSTRACT: To facilitate transloading operations and shorten their time, the Altay Rolling Stock Building Plant⁴⁴ in collaboration with the Ye. O. Paton Institute of Electric Welding⁴⁴, has designed and built a boxcar with a sliding roof (Fig. 2) made of the AMg6 aluminum-magnesium alloy. The roof (Fig. 1) consists of two parts each of which can be slid by means of power drive in either direction, thus making possible the mechanized loading and unloading of large shipments and bulk freight. Each half-roof consists of a frame atop a plating of 2 mm thick sheets of AMg6 aluminum-magnesium alloy. The welding of these sliding roofs was performed with the aid of a nonconsumable (tungsten) electrode in an argon atmosphere. The frame

Card 1/4

L 65086-65

ACCESSION NR: AP5021227

was assembled and welded in a special positioner equipped with locators and adjustable clamps for aligning the ten trapezoidal arches. The plating sheets were simultaneously welded together and welded to the arches, in the following regime: welding current $I_w = 130-200$ a; tungsten electrode of 3-5 mm diameter; filler wire of 3-5 mm diameter; $Q_{argon} = 8-10$ liters/min. In addition, the plating sheets were attached to the arches by means of manual argon-arc spot (diameter 12 mm) welding spaced 150 mm apart. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 02

SUB CODE: IE, GO

NO REF SOV: 000

OTHER: 000

Card 2/4

L 65086-65

ACCESSION NR: AP5021227

ENCLOSURE: 01

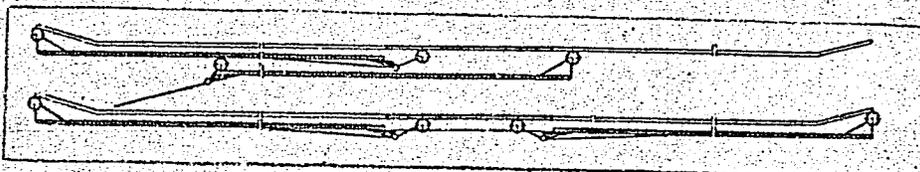


Fig. 1. Schematic of slide of the half-roof

Card 3/4

L 65086-65

ACCESSION NR: AP5021227

ENCLOSURE: 02

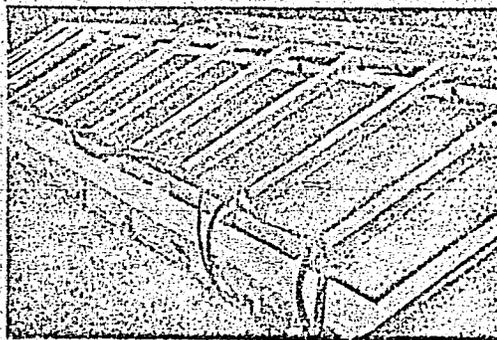


Fig. 2. Welded frame of half-roof

M&R
Card 4/4

I 41330-65 EWT(d)/EPA(s)-2/EWT(m)/EWA(d)/EWP(v)/EPR/T/EWP(t)/EWP(k)/EWP(h)/
EWP(z)/EWP(b)/EWP(l)/EWA(c) Pf-4/Ps-4 IJP(c) MJW/JD/PA
ACCESSION NR: AP5005003 S/0125/65/000/001/0061/0063

38
35
B

AUTHOR: Poritskiy, M. P. (Engineer); Steblovskiy, B. A. (Engineer);
Naroditskiy, B. I. (Engineer)

TITLE: Welding of an aluminum ventilation duct

SOURCE: Avtomaticheskaya svarka, no. 1, 1965, 61-63

TOPIC TAGS: ²¹ ¹⁷ aluminum welding, aluminum duct

ABSTRACT: The techniques used in welding a 100-m-long, 6-m-ID AMTsAM aluminum alloy duct (sketch supplied) from 6-mm-thick 1.5x5-m plates are briefly described. Submerged-arc butt-welding with a steel backing and without cutting edges was used for joining the plates; AMTs 1.3-mm electrode wire was fed automatically by a modernized ABS welding head; the spacing in the twin electrodes was about 8 mm. Welding current was 180-200 amp; voltage, 30-32 v; rate, 420-450 m/hr. Weld test results: ultimate tensile strength,

Card 1/2

L 41330-55

ACCESSION NR: AP5005003

3

13 kg/mm ; bending angle, 150° or more. It is found that single-side automatic welding of AMTs aluminum with AN-A1 flux does not require edge cutting and is considerably cheaper than argon arc-welding. Orig. art. has: 4 figures.

ASSOCIATION: Institut elektrosvariki im. Ye. O. Patona AN UkrSSR (Institute of Electric Welding, AN UkrSSR); Kuznetskiy zavod metallokonstruktsiy (Kuznetsk Metal-Construction Plant)

SUBMITTED: 25Jul64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2 *ce*

USSR/ Electronics - Measuring instruments

Card 1/1 Pub. 89 - 27/40

Authors Poritsky, O., Kiev

Title The need for designing a universal measuring-instrument operating on audio frequencies

Periodical Radio 10, page 37, Oct 1954

Abstract A general suggestion is made for designing a universal measuring-instrument (operating on audio frequencies) incorporating an audio-frequency generator and a vacuum tube voltmeter.

Institution:

Submitted:

KOLISHCHUK, Viktor Terent'yevich, inzh.; TRAVNIKOV, Yevgeniy
Nikolayevich, inzh.; FORITSKIY, O.V., kand. tekhn. nauk,
retsenzent

[Calculation and design of magnetic tape recorders] Kon-
struirovaniye i raschet magnitofonov. Kiev, Tekhnika,
1965. 389 p. (MIRA 18:8)

S/108/60/015/009/011/012/XX
B012/B063

6.5200
9.7910

AUTHOR:

Poritskiy, O. V., Active Member of the Society

TITLE:

Some Problems Concerning the Theory and Calculation of
Reproducing Magnetic Heads

PERIODICAL:

Radiotekhnika, 1960, Vol. 15, No. 9, pp. 64 - 67

TEXT: The present paper was read at the Ukrainskaya respublikanskaya nauchno-tekhnicheskaya konferentsiya NTORiE im. A. S. Popova (Ukrainian Scientific and Technical Conference of NTORiE imeni A. S. Popov) in Kiyev on May 8, 1957, in which O. V. Poritskiy described the effect of the geometric and magnetic parameters of the core of the reproducing head on reproduction. The approximated theoretical analysis of the production of magnetic recording by the toroidal heads is carried out with regard to the finite magnetic reluctance of the head cores, i.e., the distributed parameters of the complex and branched magnetic circuit are replaced by two equivalent, punctiformly distributed parameters. Fig. 1 illustrates the flux distribution in the head during the reproduction of medium waves. A formula is derived which gives an approximate

Card 1/2

TIMOFEYEV, B.B., doktor tekhn. nauk; TARANUKHA, A.I.; PORITSKIY, G.V.,
kand. tekhn. nauk

Wide-band modulation magnetic blocks with high yield. Avt. i
prib. no.4:37-40 C-D '64 (MIRA 18:2)

SFYNU, G.A.; PORITSKIY, O.V.

Shift pickup called "magnetic stops." Avtom.i prib. no.1:35-39
'59. (MIRA 13:10)

(Magnetic instruments)

FORITSKIY, O.V.

Questions about the theory and calculation of magnetic recording heads. Radiotekhnika 15 no.9:64-67 S '60. (MIRA 13:9)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S.Popova.
(Magnetic recorders and recording)

9.7910
6.5000

32154 R
S/108/60/015/009/011/012/XX
B116/B218

AUTHOR: Poritskiy, O. V., Member of the Society (see Association)

TITLE: Some problems concerning the theory and calculation of playback heads

PERIODICAL: Radiotekhnika, v. 15, no. 9, 1960, 64-67

TEXT: The present paper was read at the Ukrainskaya respublikanskaya nauchno-tekhnicheskaya konferentsiya NTORiE im. A. S. Popova (Ukrainian Scientific and Technical Conference of NTORiE imeni A. S. Popov) which took place in Kiyev on May 8, 1957. It presents an approximate theoretical study of the reproduction of magnetic recording by means of toroidal heads, under consideration of the finite magnetic resistance of the cores of the head. An approximate formula for the distribution of magnetic flux within the playback head is obtained. The experimental method is described and the results thus obtained are compared with the theoretical ones. For the present case, the only convenient method of an approximate study is the one proposed by K. Schwarz (Ref. 5: Frequenz, Bd. 6, Heft 2, 1952), and further

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developed by E. D. Daniel and P. E. Axon (Ref. 6: PIRE, v. 100, p. III, May 1953). The author studies the reproduction of a magnetic longitudinal recording of a sinusoidal oscillation in a range of wavelengths which is determined by $s \ll \lambda/2 < l$; s is the width of the reproduce gap, λ is the wavelength of the recording, and l is the length of the contact zone between head and tape. The magnetic flux reproduced by the tape is essentially determined by the component of longitudinal magnetization. The influence of the core (of the playback head) may be considered as a redistribution of the surface induction between the two sides of the tape. It is assumed that the head consists of two pole pieces (made of a material having practically no magnetic resonance since $\mu \rightarrow \infty$) and a finite magnetic resistance of the core (located in the rear part of the core, most distant from the front gap). The distributed parameters of the complex and ramified magnetic circuit (of the head) are replaced by two equivalent lumped parameters, the magnetic resistance of the core, and the magnetic resistance of the front gap. The author studies that part of the magnetic flux which is closed by the core of the head. He neglects the distortions occurring on the edges of the tape and solves the problem for the plane

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situated parallel to the axis of the tape and perpendicular to the surface of the latter. The result thus obtained must then be multiplied by the actual width of tape b . Fig. 1 shows the distribution of the flux within the head during the reproduction of medium wavelengths. Since $s \ll \lambda$, the width of the reproduce gap may be neglected (not so, however, its magnetic resistance).

$n = \frac{r_{m \text{ core}}}{r_{m \text{ gap}}}$ (3), where r_m is the magnetic resistance. Since

$B_{\text{inner}} = B_{\text{inner} \cdot m} \cdot \sin \frac{2\pi x}{\lambda}$ (B_{inner} denoting the inner induction), it holds for the part of the flux which along its path A is closed by the core of the

head: $\phi_A = \frac{\phi_{\text{inner} \cdot m}}{n+1} \sin \frac{2\pi x}{\lambda}$ (8). In the case of a constant carrier

velocity $v = x/t$, the emf at the output of the ordinary playback head is given by

$$E_1 = -w \frac{d\phi_A}{dt} = -w \frac{\phi_{\text{inner} \cdot m}}{n+1} \omega \cos \omega t \quad (9).$$

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Some problems concerning the theory...

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while the emf at the output of the modulator head is given by E_2

$$= -k_e \frac{\Phi_{\text{inner } m}}{n+1} \sin \omega t \quad (10)$$
, where w denotes the number of turns of the

windings, and k_e the sensitivity of the modulator head. Fig. 2 presents the theoretical curve of the distribution of flux within the head as a function of n . It follows from (8), (9), and (10) that in the case of a reproduction of medium wave lengths the amount of the useful flux in the head depends on the length of the reproduce gap while it is independent of the wavelength. This relation is not due to the principal reproduction characteristics but is conditioned by the distribution characteristics of the magnetic flux reproduced in the core of the head. Fig. 3 presents the experimental scheme and Fig. 4 gives the results obtained. An inter-comparison of Figs. 2 and 4 shows that: 1) The experimentally recorded curve $\Phi_A = \varphi(n)$ exhibits the same character as the one calculated from formula (8) (Fig. 2). 2) A leakage flux occurs in the head, which increases with increasing n , and if $n = 5$ attains approximately 35% of the magnetic flux branched off to the core. 3) For $n > 1$, the magnetic flux

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branched off to the core is a little higher than one should expect according to formula (8). The formulas and curves obtained contain all data on geometric and magnetic head parameters (coefficient n): 1) $\phi_A / \text{inner } m = \varphi(n)$ is the main curve for calculating the optimum parameters of modulator heads.

2) The output voltage of ordinary heads is proportional to the flux traversing the windings. As a rule, the windings are symmetrical to the core and thus make use of not only ϕ_A but also part of the leakage flux of the core. The dashed curve in Fig. 4 shows the dependence of the useful flux on n (on the assumption that the total main flux of the core and 50% of its leakage flux traverse the windings). The relations obtained also allow a determination of the frequency response caused by the reduction of the dynamic permeability of the playback head. There are 4 figures and 7 references: 2 Soviet-bloc and 5 non-Soviet-bloc. The three references to the English-language publications read as follows: R. L. Wallace. BSTJ, 1951, v. 30; W. K. Westmijze. Philips Research Reports, v. 8, no. 3, 4, 5, 1953; E. D. Daniel and P. E. Axon. PIRE, v. 100, p. III, May 1953. X

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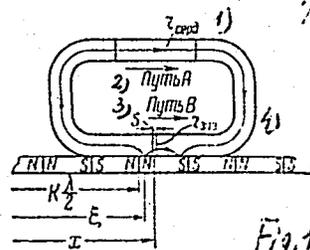
Some problems concerning the theory...

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ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektro-
svyazi im. A. S. Popova (Scientific and Technical Society
of Radio Engineering and Electrical Communications imeni
A. S. Popov) [Abstracter's note: Name of association was
taken from first page of journal]

SUBMITTED: September 22, 1959 (initially)
February 2, 1960 (after revision)

Legend to Fig. 1: 1) r_{core} ; 2) path A;
3) path B; 4) r_{gap} .



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PORITSKIY O.V.

11 июня
(с 18 до 22 часов)

Д. Н. Васильев,
Р. Р. Армада

Методы измерения амплитуды и частоты
колебаний.

А. А. Фридрихов,
И. И. Морозов

О зависимости амплитудности тока при изменении
температуры гальваники.

А. А. Фридрихов

Об изменении тока при изменении температуры
гальваники.

В. А. Горюхи

К теории нелинейной гальваники.

12 июня
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М. В. Лыфун,
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Влияние температуры и влажности на
характеристики гальваники.

М. Г. Артамонов

Фотодетекторное устройство для визуального
контроля за состоянием электровакуумных приборов
на производстве.

14 СЕССИЯ ЭЛЕКТРОННО-ВЫЧИСЛИТЕЛЬНОЙ
ТЕХНИКИ
Руководитель А. В. Гусманов

16 июня
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Сообщения по вопросам с докладом о состоянии
разработки

В. И. Георгиев

Динамический трекер на вакуумно-электронном
принтере

А. Ю. Горюхи

Э. В. Гальперин

Е. И. Морозов

И. А. Морозов

Г. В. Калашников

Специальные методы калибровки измерительных
устройств на вакуумно-электронном приборе.

А. В. Георгиев

Т. И. Артамонов

И. С. Иванов

report submitted for the Confidential Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications to A. S. Puzov (VKSIE), Moscow,
8-10 June, 1959

L 22135-65 EWT(d)/EWT(1)/EED-2/EWP(1)/EWA(h) Po-4/Pq-4/Pg-4/Pk-4/Pe-4
IJP(c) BB/GG

ACCESSION NR: AP5001741

S/0302/64/000/004/0037/0040

AUTHOR: Timofeyev, B. B. (Doctor of technical sciences); Taranukha, A. I.;
Poritskiy, O. V. (Candidate of technical sciences)

TITLE: High-efficiency broadband modulation magnetic heads ✓

31
B

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1964, 37-40

TOPIC TAGS: magnetic head, magnetic data writing, magnetic data reading

ABSTRACT: The essential shortcomings of conventional reading heads (low efficiency, output instability, circuit complexity, narrow band) are claimed to have been overcome in a new design (see Enclosure 1). Using the principle of a resonant bridge, the new head has its output coil wound on modulator 2, 3 over the bias windings 5, 6. This arrangement permits reducing the modulated-carrier loss, good matching with the bias oscillator and amplifier, decoupling between the bias and output circuits, and ensures a high efficiency. An output voltage of

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ACCESSION NR: AP5001741

3-10 v across a 1.5-kohm resistor obtained from a 1-mm track within 0-50 kc is reported. The a-c bias frequency used is 0.2-0.5 Mc. A split-type laminated 80-NKbS permalloy modulator proved far superior to the conventional ferrite type. The design features of a single-track and a 20-track (for 35-mm tape) head are reported. Orig. art. has: 5 figures.

ASSOCIATION: Institut kibernetiki AN UkrSSR (Institute of Cybernetics, AN UkrSSR)

SUBMITTED: 00

ENCL: 01

SUB CODE: DP

NO REF SOV: 002

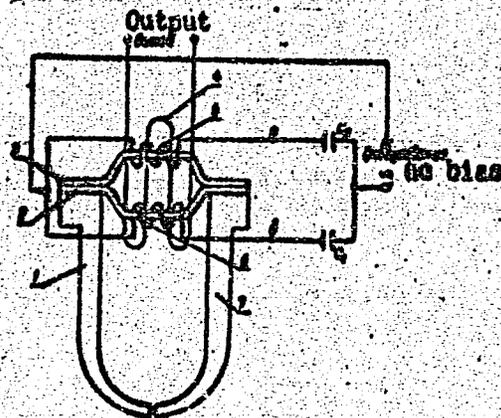
OTHER: 001

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ACCESSION NR: AP5001741

ENCLOSURE, 01



New magnetic head

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L 12869-65 EWT(d)/EEC(k)-2/EEC-4 Pa-4/Pq-4/Pg-4/Pk-4/P1-4 ASD(a)-5/ESD(c)/
ACCESSION NR: AP4044986 ASD(dp) Z/0039/64/025/009/0543/0547

AUTHOR: Porizek, Radoslav, (Engineer)

TITLE: Contribution to the theory and design of electrodeless capacitive transducers B

SOURCE: Slaboproudy obzor, v. 25, no. 9, 1964, 543-547

TOPIC TAGS: electric measurement, capacitive transducer, circuit theory
qm

ABSTRACT: To facilitate the conversion of the readings of capacitive electrodeless transducers into true values of measured electric properties (such as the tangent of the loss angle or the absolute admittance), the author shows a method of transforming the equations of the equivalent circuit of the transducer into equations of either a parallel or series resonant circuit. Plots with which to determine the true resistance and capacitance of the measured material from the

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ACCESSION NR: AP4044986

resistance and capacitance readings of the transducer are presented and the methods of constructing and using such plots are described. Relations for the design of an optimal capacitive transducer are also presented. The system described is in use for the measurement of pyrite flotation concentrate. Orig. art. has: 10 figures and 22 formulas.

ASSOCIATION: Ustav teorie meranie SAV, Bratislava (Institute for Measurement Theory SAV)

SUBMITTED: 02Jan64

ENCL: 00

SUB CODE: EC

NR REF SOV: 001

OTHER: 002

Card 2/2

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Grounding of high-voltage electric installations on water pipes. p. 287.

VODNI HOSPODARSTVI. (Ministerstvo energetiky a vodniho hospodarstvi a Vedecka technicka spolecnost pro vodni hospodarstvi) Praha, Czechoslovakia, No. 6, June 1959.

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Uncl.

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November 1959

Uncl.

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The summer phytoplankton of the lakes in southeast Estonia. p. 79.

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Monthly List of East European Accessions (EEAI) LC, vol. 8, no. 11
November 1959

Uncl.

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HYDROBIOLOGILISED UURIMUSED. GIDROBIOLOGICHESKIE ISSLEDOVANIJA.
Tartu, Hungary. no. 1, 1958.

Monthly List of East European Accessions (SEAI) LC, vol. 8, no. 11
November 1959

Uncl.

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YUDIN, D.L., kand. tekhn. nauk, dotsent; FILIPOVICH, S.I.,
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no.159:75-88 '62. (MIRA 16:6)

(Locomotives—Transmission devices)

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POBKACHEV, M.A., inzh.

Mechanical reinforcing of gear teeth along the whole profile.
Elek.i tepl.tiaga 14 no.3:25-26 Mr '60. (MIRA 13:7)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.
(Gearing, Spur)